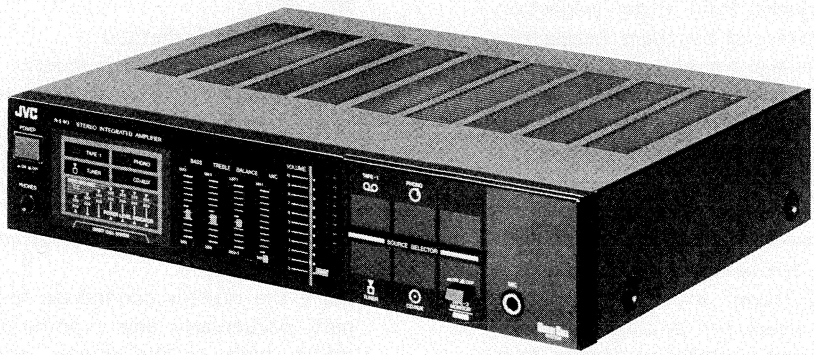
A-E40B

# JVC

# SERVICE MANUAL

## STEREO AMPLIFIER

## MODEL A-E40B



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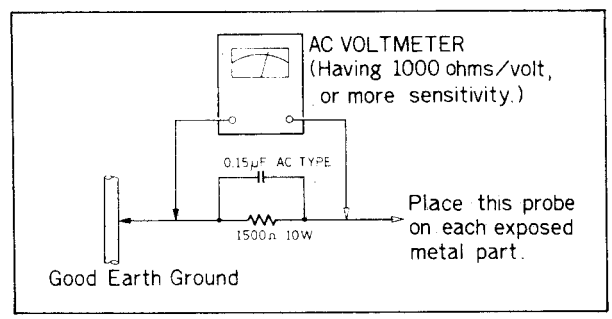
This manual combines two single volumes; Service manual and Parts list.

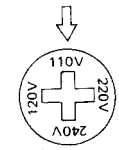

No. 2790
Dec. 1984

# Safety Precautions

1. The design of this product contains special hardware, many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the product have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. Electrical components having such features are identified by shading on the schematics and by ( ⚠ ) on the parts list in Service manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list in Service manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and/or the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard.
   When service is required, the original lead routing and dress should be observed, and they should be confirmed to be returned to normal, after re-assembling.
5. Leakage current check
   (Safety for electrical shock hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the Products (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5 mA AC (r.m.s.).
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1500 ohms 10 W resistor paralleled by a 0.15 μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).


AC VOLTMETER
(Having 1000 ohms/volt, or more sensitivity.)
0.15μF AC TYPE
1500Ω 10W
Place this probe on each exposed metal part.
Good Earth Ground

**CHECKING YOUR LINE VOLTAGE (For U.S. Military Market and Other Countries)**
Before inserting the power plug, please check this setting to see that it corresponds with the line voltage in your area. If it doesn't, be sure to adjust the voltage selector switch to the proper setting before operating this equipment. The voltage selector switch is located underneath the bottom cover.




**CAUTION:** Before selecting the "Voltage selector switch" to proper voltage disconnect the power plug.

# 1. Specifications

**CIRCUITRY**

Equalizer amplifier : MM equalizer amplifier
Power amplifier : Differential complimentary OCL amplifier

**OVERALL CHARACTERISTICS**

Output power : **40 watts per channel, min. RMS, both channels driven into 8 ohms from 40 Hz to 20 kHz, with no more than 0.9 % total harmonic distortion.**
45 watts per channel, min. RMS, both channels driven into 8 ohms at 1 kHz with no more than 0.7 % total harmonic distortion.
Total harmonic distortion : 0.09 % at 20 watts 1kHz, 8 ohms
Speaker impedance : 8 ohms – 16 ohms
Input terminals
Input sensitivity/impedance
PHONO : 2.5 mV/47 kohms
TUNER : 150 mV/47 kohms
CD/AUX : 250 mV/47 kohms
TAPE-1 : 200 mV/47 kohms
TAPE-2 : 150 mV/33 kohms

Frequency characteristic
TUNER : 20 Hz – 40 kHz $^{+1.0}_{-3.0}$ dB
CD/AUX : 20 Hz – 40 kHz $^{+1.0}_{-3.0}$ dB
TAPE-1 : 20 Hz – 40 kHz $^{+1.0}_{-3.0}$ dB
TAPE-2 : 20 Hz – 40 kHz $^{+1.0}_{-3.0}$ dB
Tone controls : TREBLE: ±8 dB (10 kHz)
BASS: ±8 dB (100 Hz)

**GENERAL**

Power source : See table below
Dimensions : 340(W) x 75(H) x 269(D) mm (13-7/16" x 3" x 10-5/8") ")
Weight (Net) : 3.8 kg (8.4 lbs)

*Design and specifications subject to change without notice.*

**POWER SPECIFICATIONS**

| Areas | Line Voltage & Frequency | Power Consumption |
|---|---|---|
| U.S.A. | AC 120 V∿, 60 Hz | 150 watts, 185 VA |
| Canada | | |
| Continental Europe | AC 220 V∿, 50 Hz | 150 watts |
| U.K. | AC 240 V∿, 50 Hz | 110 watts |
| Australia | | |
| Other areas | AC 110/120/220/240 V∿ selectable, 50/60 Hz | 110 watts |

# 2. Service Precautions

1. Before repairing, be sure to discharge the large electrolytic capacitors through a resistor of about 100 ohms/1 watt.
2. To check the P.C. Board, remove the chassis base and refer to "Disassembling" below.
3. When disassembling, be careful that the upper side (hairline surface) of the front panel is not scratched.

# 3. Disassembling

### 3-(1) Removal of the Top Cover

1. Stick the anti-scratch sheet on the upper side of the front panel as shown in Fig. 1.
2. Remove six screws, four on the both sides of the cover and two on the rear panel.
3. Lift up the rear side slightly and remove the top cover by releasing the locking of the front panel.

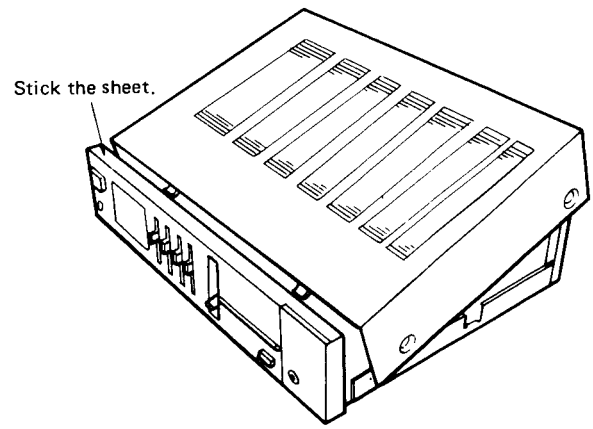



Fig. 1

### 3-(2) Removal of the chassis base

1. Remove the top cover.
2. Remove two fixing screws on the upper side of the power amplifier P.C.B.
3. Remove ten screws on the base (all screws except for foot screws) and two fixing screws of the front panel then open as shown in Fig. 2.

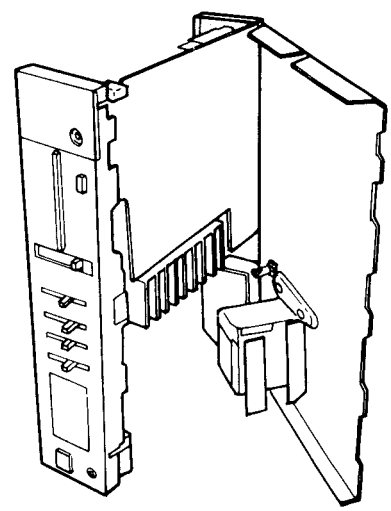
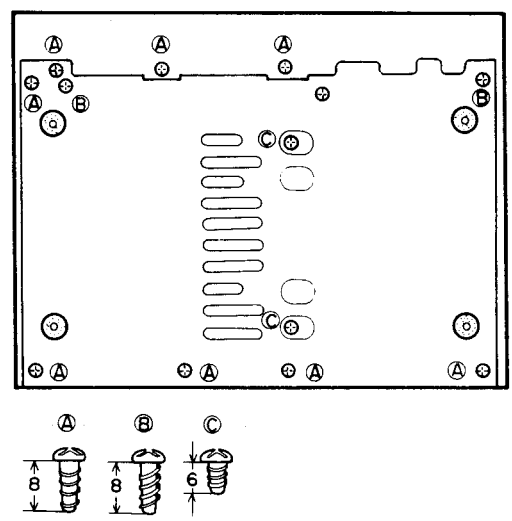


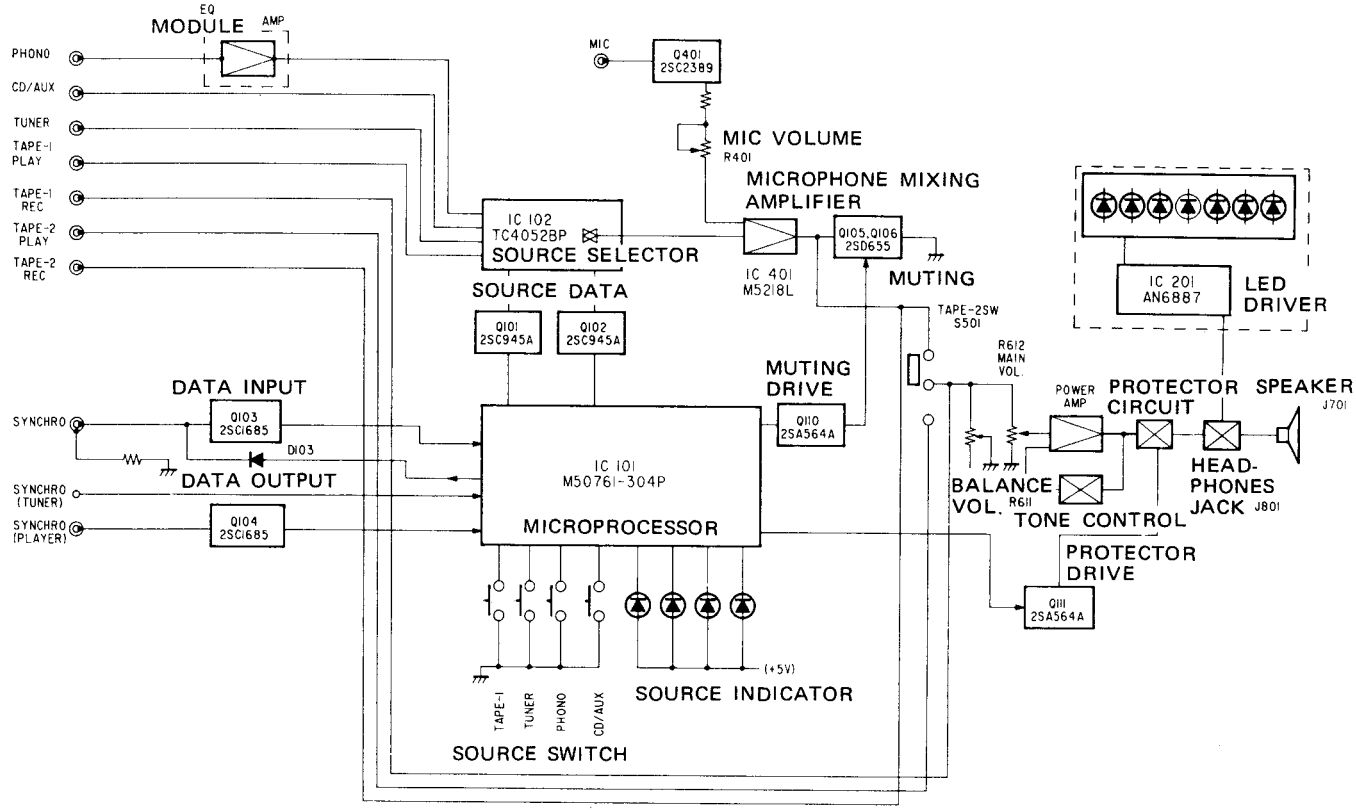
Fig. 2

**Note:**

- As two types of fixing screw are used for the base, make sure the screws are correct when reinstalling.

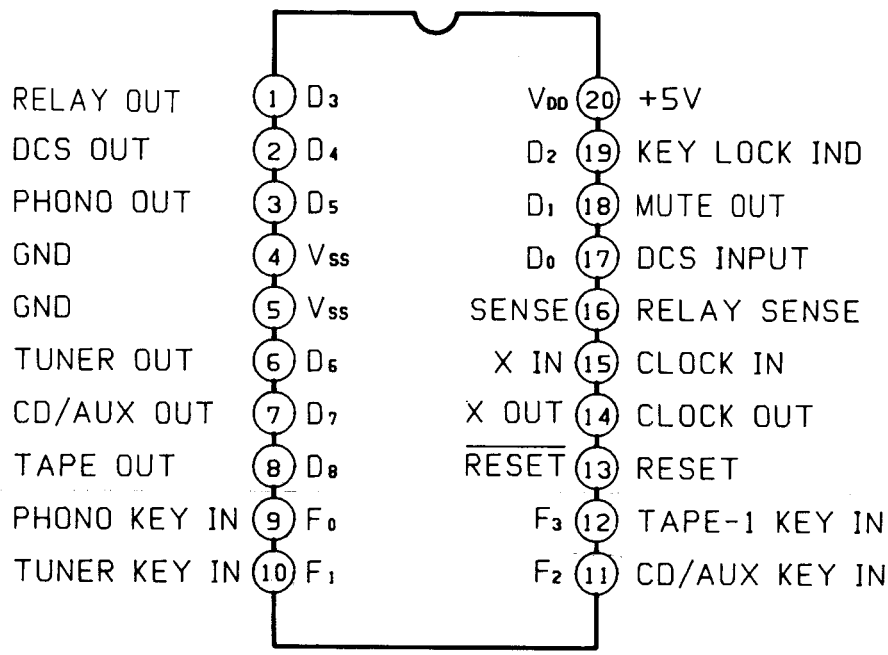


# 4. Block Diagram




# 5. Guidance to Repairing

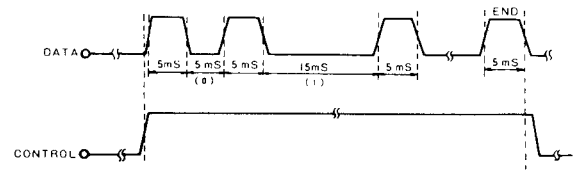
### 5-(1) IC 101 (M50761-304P) Pin Functions


RELAY OUT 1 D3
DCS OUT 2 D4
PHONO OUT 3 D5
GND 4 VSS
GND 5 VSS
TUNER OUT 6 D6
CD/AUX OUT 7 D7
TAPE OUT 8 D8
PHONO KEY IN 9 F0
TUNER KEY IN 10 F1
VDD 20 +5V
D2 19 KEY LOCK IND
D1 18 MUTE OUT
D0 17 DCS INPUT
SENSE 16 RELAY SENSE
X IN 15 CLOCK IN
X OUT 14 CLOCK OUT
RESET 13 RESET
F3 12 TAPE-1 KEY IN
F2 11 CD/AUX KEY IN

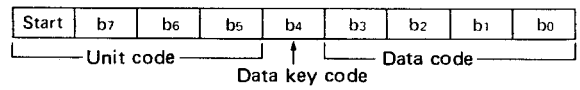
## 5-(2) Data Transmission Method

Two types of DCS are provided – one is the SYNCHRO TUNER terminal (2.5 mm dia.) exclusively for the TUNER and the SYNCHRO terminal (2.5 mm dia.) exclusively for the L-E20B; the other is the SYNCHRO terminal (3.5 mm dia.) for other equipment (L-E30B etc).
The SYNCHRO TUNER terminal exclusively for the TUNER is normally in the open collector status on the TUNER side and when the tuner's preset station button, etc. is pressed, the "L" level is maintained for about 10 – 100 msec., resulting in switching the source. When the PLAY button is pressed on the turntable, the SYNCHRO terminal exclusively for the turntable (L-E20B) becomes "H" level of about 5 V.
The SYNCHRO terminal (3.5 mm dia.), connected via the common bus line to other equipment, handles two-way data exchange by the following data transmission method.

**Transmitted data**




**1-word/1-command structure**




$b_4 = 0$ Operation CODE
$b_4 = 1$ Station number or tune number code (not used in this model)

## 5-(3) Signal Code List

### 1) Code list 1: $b_4 = 0$ (OP = Optional)

#### (A) DECK

| Hexadecimal | Data code | | | | Function | Key input with same meaning |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | ———— | ———— |
| 1 | 0 | 0 | 0 | 1 | PLAY status set | PLAY |
| 2 | 0 | 0 | 1 | 0 | STOP status set ["STOP (I)" signal] | STOP |
| 6 | 0 | 1 | 1 | 0 | REC PAUSE set after 4-sec. REC MUTE | REC MUTE · PAUSE |
| 9 | 1 | 0 | 0 | 1 | REC PLAY status set | REC · PLAY |
| E | 1 | 1 | 1 | 0 | STOP status set only during PLAY | ———— "STOP (II)" signal |

#### (B) TURNTABLE

| Hexadecimal | Data code | | | | Function | Key input with same meaning |
|---|---|---|---|---|---|---|
| 6 | 0 | 1 | 1 | 0 | Tonearm returns to arm rest and turntable STOP status set | ———— (ALL STOP) |
| 7 | 0 | 1 | 1 | 1 | "START" | |
| 9 | 1 | 0 | 0 | 1 | Deck saves recording-discontinued signal | ———— (NON REC) |
| A | 1 | 0 | 1 | 0 | REC PAUSE status set from conditions other than "deck in recording mode" | ———— (REC · PAUSE) |

#### (C) AMPLIFIER

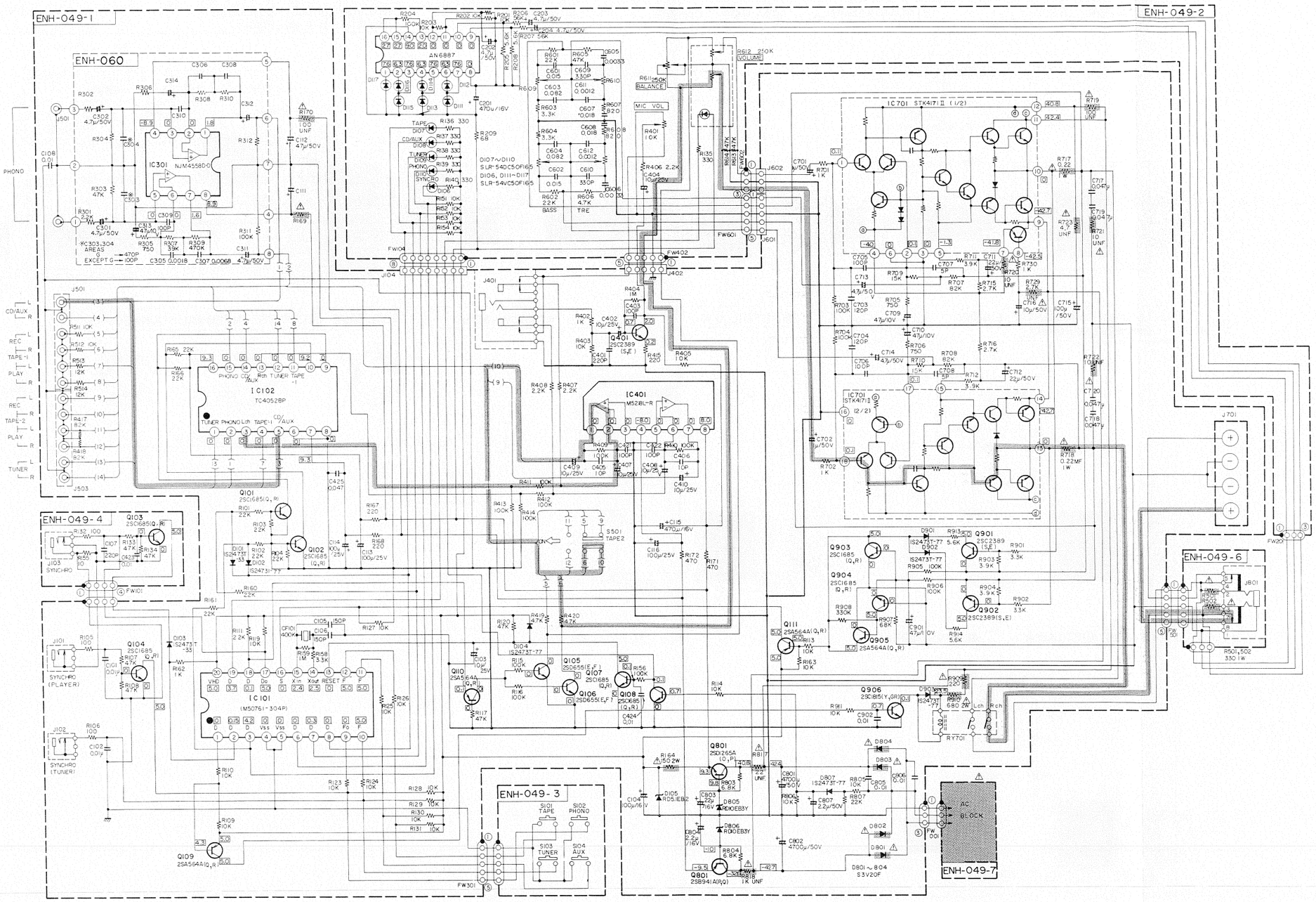
| Hexadecimal | Data code | | | | Function | Key input with same meaning |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | ———— | ———— |
| 1 | 0 | 0 | 0 | 1 | SOURCE switched to PHONO | PHONO |
| 3 | 0 | 0 | 1 | 1 | SOURCE switched to CD/AUX | CD/AUX |
| 4 | 0 | 1 | 0 | 0 | SOURCE switched to TAPE-1 | TAPE-1 |
| 9 | 1 | 0 | 0 | 1 | ———— Edit-recording start signal | ———— |
| A | 1 | 0 | 1 | 0 | SOURCE returned to previous setting [REC (SOURCE)] | ———— "REC (SOURCE)" |

**Code list**

| | Unit code | | | |
|---|---|---|---|---|
| 0 | 0 | 0 | 0 | ———— |
| 1 | 0 | 0 | 1 | DECK |
| 2 | 0 | 1 | 0 | CD PLAYER |
| 4 | 1 | 0 | 0 | TURNTABLE |
| 5 | 1 | 0 | 1 | AMPLIFIER |

As the SYNCHRO terminal uses a common bus line with all equipment as shown in the tables above, the order of connection of equipment poses no problem.
The SYNCHRO TUNER terminal and the SYNCHRO terminal are not connected to GROUND; because of this, DCS does not function when signal codes are not continuously transmitted between the equipment.

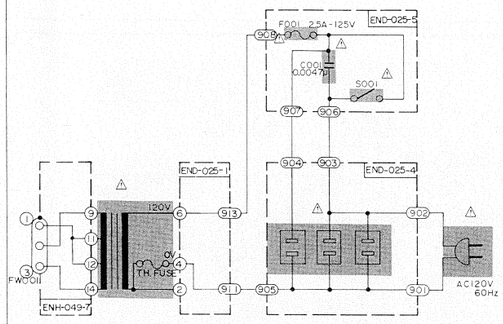
# 6. A-E40B Schematic Diagram



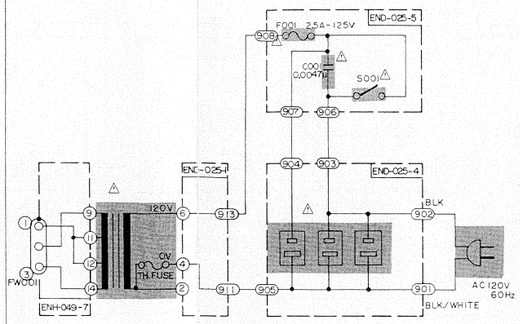

**Notes:**

1. ▒▒▒ indicates signal path.
2. When replacing the parts in the darkned area ( ▒▒▒ ) and those marked with ⚠ , be sure to use the designated parts to ensure safety.
3. This is the standard circuit diagram. The design and contents are subject to change without notice.

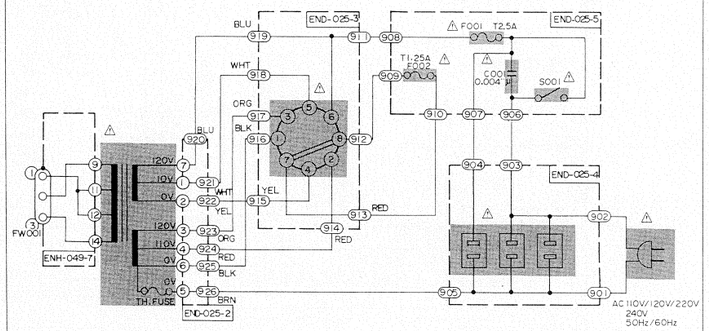
(J) FOR U.S.A. AC 120V 60Hz



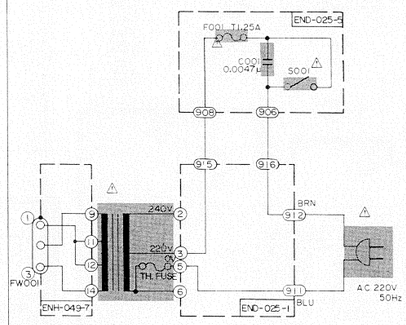

(C) FOR CANADA AC 120V 60Hz



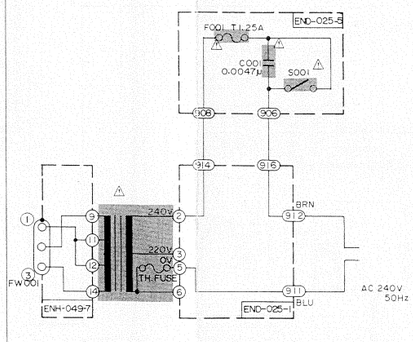

(U) FOR OTHER CONTRIES
(P) FOR U S MILITARY
AC 110V/120V/220V/240V 50/60Hz



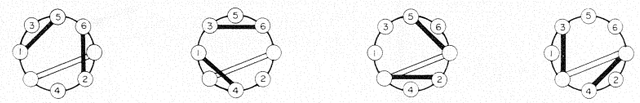

(E) FOR CONTINENTAL EUROPE
(G) WEST GERMANY AC 220V~50Hz




(BS) FOR U.K. AC 240V~50Hz

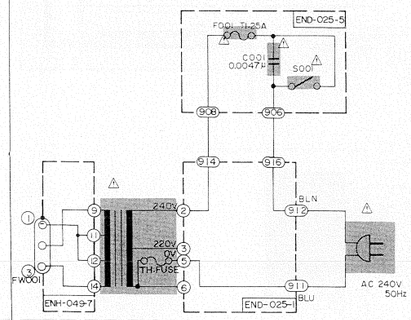



VOLTAGE SELECTOR INTERNAL CONNECTION




TOP VIEW

(A) FOR AUSTRALIA AC 240V~50Hz



# PARTS LIST

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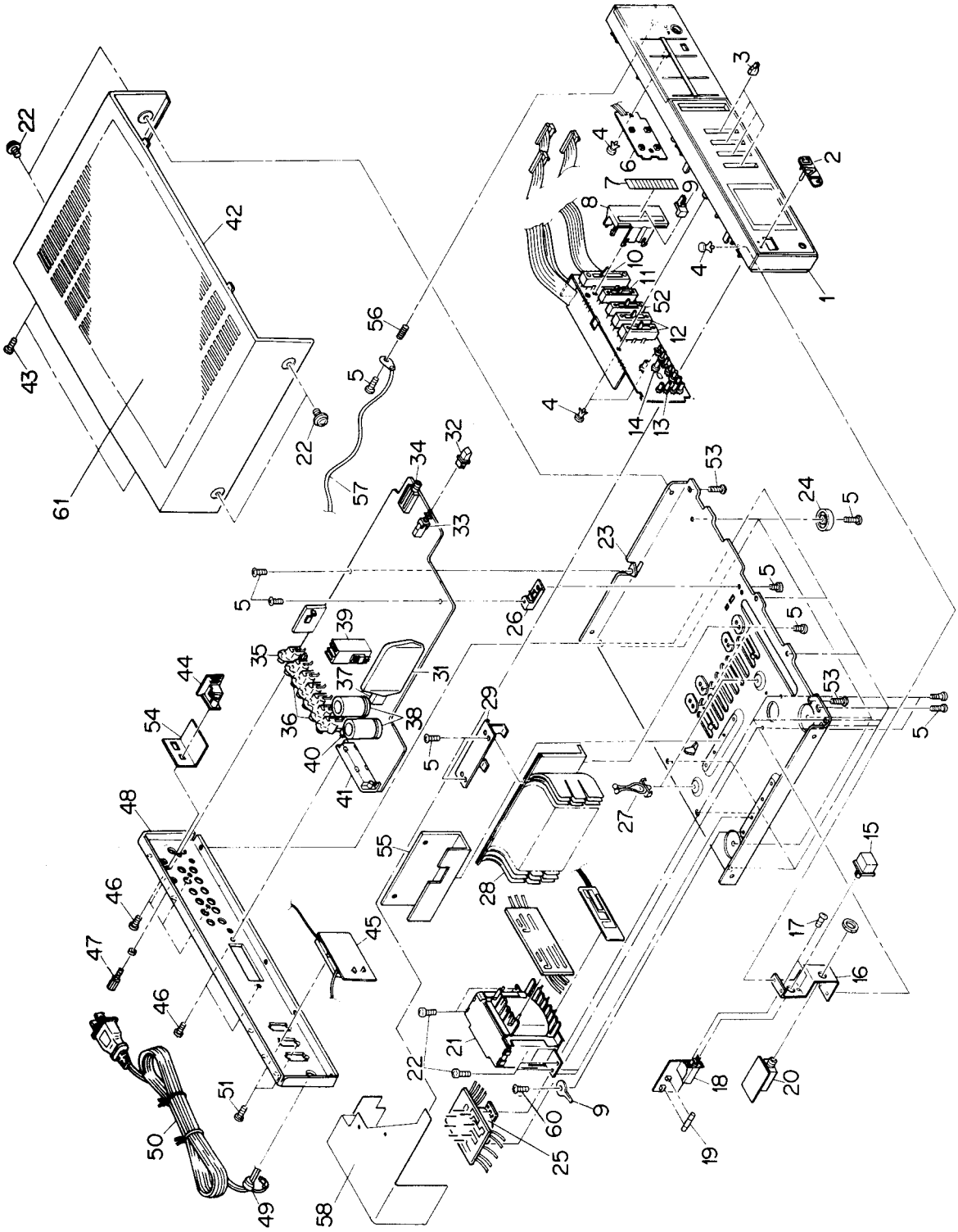
ENH-060□ Module P.C. Board Ass'y . . . . . 2 - 4
2-(2) END-025□ Power Block, etc P.C. Board Ass'y . . . . . 2 - 7
3. Packing Materials and Part Numbers . . . . . 2 - 8
4. Accessories List . . . . . 2 - 8

# 1. Exploded View and Part Numbers



| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Areas |
|---|---|---|---|---|---|---|
| | 1 | EFP-AE40B | Front Panel Ass'y | 1 | | |
| | 2 | E70912-001 | JVC Mark | 1 | | |
| | 3 | E71265-003 | Slide Knob | 4 | | |
| | 4 | E48729-007 | Plastic Rivet | 7 | | |
| | 5 | SBSB3008N | Screw | 23 | | |
| | 6 | ESP0001-007 | Push Switch | 4 | | |
| | 7 | E71710-001 | Plate | 1 | | |
| | 8 | E71708-001 | Escutcheon | 1 | | |
| | 9 | E71706-002 | Volume Knob | 1 | | |
| | 10 | QVZ5022-001 | Variable Resistor | 1 | Main | |

| ⚠ | Item | Part Number | Part Name | Q'ty | Description | Areas |
|---|---|---|---|---|---|---|
| | 11 | QVZ5205-004 | Variable Resistor | 1 | Mic | |
| | 12 | QVZ5206-003 | Variable Resistor | 2 | Bass, Treble | |
| | 13 | SLR-54DC50F | L.E.D. | 4 | Yellow | |
| | 14 | SLR-54VC50F | L.E.D. | 2 | Red | |
| | 15 | E67628-002 | Push Knob | 1 | POWER | |
| | 16 | E71770-002 | Switch Bracket | 1 | | |
| | 17 | SBST3006Z | Screw | 2 | | |
| ⚠ | 18 | QSP1106-004 | Power Switch | 1 | | Except BS |
| ⚠ | | QSP1106-004BS | Power Switch | 1 | | BS only |
| ⚠ | 19 | QMF51U1-2R5S | Fuse | 1 | | J, C |
| ⚠ | | QMF51A2-2R5S | Fuse | 1 | | U, P, PG |
| ⚠ | | QMF51A2-1R25S | Fuse | 1 | | U, P, PG, A, E, G |
| ⚠ | | QMF51E2-1R25SBS | Fuse | 1 | | BS |
| | 20 | QMS6312-020 | Headphone Jack | 1 | | |
| ⚠ | 21 | ETP1070-14JA | Power Transformer | 1 | | J, C |
| ⚠ | | ETP1070-14FA | Power Transformer | 1 | | U, P, PG |
| ⚠ | | ETP1070-14EA | Power Transformer | 1 | | E, A, G |
| ⚠ | | ETP1070-14EABS | Power Transformer | 1 | | BS |
| | 22 | E61660-004 | Screw | 4 | | |
| | 23 | E24823-001 | Chassis Base | 1 | | J, C, E, A, G, BS |
| | | E24823-002 | Chassis Base | 1 | | U, P, PG |
| | 24 | E47227-021 | Foot | 4 | | |
| ⚠ | 25 | QSR0085-007 | Voltage Selector | 1 | | U, P, PG |
| | 26 | E68867-002 | Bracket | 1 | | |
| | 27 | QHW2115-001 | Wire Clamp | 2 | | |
| | 28 | E303598-001 | Heat Sink | 1 | | |
| | 29 | E71709-001 | Leaf Spring | 1 | | |
| | 30 | — | — | | | |
| | 31 | STK4171MK2 | Power Pack I.C. | 1 | | |
| | 32 | VXP4346-001 | Push Button | 1 | | |
| | 33 | QST2101-E06 | Push Switch | 1 | TAPE-2, MONITOR | |
| | 34 | QMS6313-019 | Mic Jack | 1 | | |
| | 35 | EMN00TV-201A | 2P Pin Jack | 1 | PHONO | |
| | 36 | EMN00TV-602A | 6P Pin Jack | 2 | AUX, TAPE-1, 2, TUNER | |
| | 37 | ESK5D24-216 | Relay | 1 | | |
| | 38 | QEZ0061-478 | Electrolytic Capacitor | 2 | | |
| | 39 | E70945-H40B | Heat Sink | 1 | | |
| | 40 | QMS2501-105 | Mini Jack | 1 | | |
| | 41 | EMB90YV-401A | Speaker Terminal | 1 | | |
| | 42 | E24575-003 | Metal Cover | 1 | | J, C |
| | | E24575-005 | Metal Cover | 1 | | E, A, G, BS, U, P, PG |
| | 43 | SHSB3008M | Screw | 2 | | |
| | 44 | QMS3501-018 | Mini Jack | 1 | DCS | |
| ⚠ | 45 | QMC0637-004 | 3P AC Outlet | 1 | | J, U, P, PG |
| ⚠ | | QMC0638-001 | 3P AC Outlet | 1 | | C |
| | 46 | SBSB3008M | Screw | 8 | | |
| ⚠ | 47 | E70078-001 | GND Terminal | 1 | | |
| | 48 | E24824-011 | Rear Panel | 1 | | J, C |
| | | E24824-010 | Rear Panel | 1 | | U, P, PG |
| | | E24824-009 | Rear Panel | 1 | | A, BS |
| | | E24824-008 | Rear Panel | 1 | | E, G |
| ⚠ | 49 | QHS3876-162 | Cord Stopper | 1 | | Except BS |
| ⚠ | | QHS3876-162BS | Cord Stopper | 1 | | BS only |
| ⚠ | 50 | QMP1200-200 | Power Cord | 1 | | J |
| ⚠ | | QMP1340-200 | Power Cord | 1 | | C |
| ⚠ | | QMP7600-250 | Power Cord | 1 | | U, P, PG |
| ⚠ | | QMP3900-200 | Power Cord | 1 | | E, G |
| ⚠ | | QMP2560-244 | Power Cord | 1 | | A |
| ⚠ | | QMP9017-008BS | Power Cord | 1 | | BS |
| | 51 | SDSB3008M | Screw | 2 | | |
| | 52 | QVZ5205-001 | Variable Resistor | 1 | Balance | |
| | 53 | SBSF3008Z | Screw | 2 | | |
| | 54 | E72039-001 | Shield Bracket | 1 | | |
| | 55 | E69500-004 | Sheet | 1 | | |
| | 56 | E72103-001 | Comp. Spring | 1 | | |
| | 57 | EWF102-012 | Wire Ass'y | 1 | | |
| | 58 | E30381-001 | Primary Cover | 1 | | |
| | 59 | E72018-001 | Wire Clamp | 1 | | E, A, G, BS |
| | 60 | E61660-004 | Screw | 1 | | E, A, G, BS |
| | 61 | E24134-007 | Grill | 1 | | Except J.C |

⚠ : Safety Parts

**The Marks for Designated Areas**

J . . . . . U.S.A.
C . . . . . Canada
E . . . . . Europe
A . . . . . Australia
G . . . . . West Germany
BS . . . . . U.K.
P, PG . . . . . U.S. Military Market
U . . . . . Other Countries

# 2. Printed Circuit Board Ass'y and Parts List

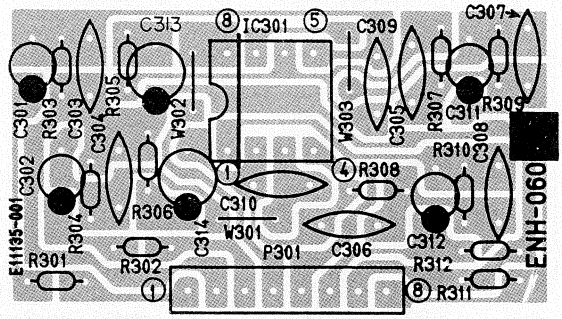
## 2-(1) ENH-049□ Amplifier P.C. Board Ass'y

**Note:** ENH-049□ varies according to the area employed. See note (1) when placing an order.

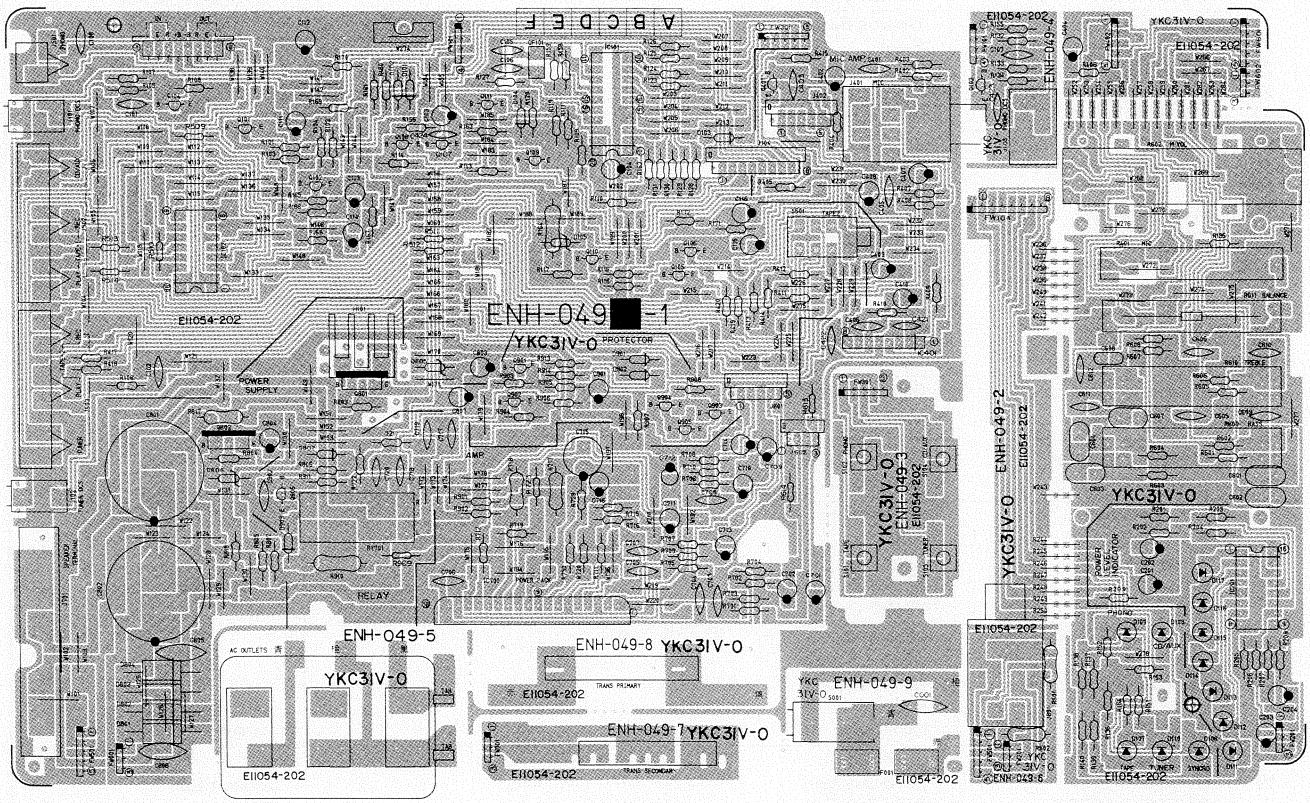
**Note (1)**

| P.C. Board Ass'y | Designated Areas |
|---|---|
| ENH-049 [B] | U.S.A. & Canada |
| ENH-049 [C] | Europe, Australia, U.K., U.S. Military Market & Other Countries |
| ENH-049 [F] | West Germany |

**ENH-060 Module P.C. Board Ass'y**




**ENH-049□ Amplifier P.C. Board Ass'y**




**Parts List of Module P.C. Board Ass'y**

| ⚠ | Item No. | Part Number | Description | | | Areas |
|---|---|---|---|---|---|---|
| | IC301 | NJM4558D-D | | | I.C. | |
| | C301 | QETC1HM-475 | 4.7 μF | 50 V | Electro | |
| | C302 | QETC1HM-475 | 4.7 μF | 50 V | Electro | |
| | C303 | QCY31HK-101 | 100 pF | 50 V | Ceramic | Except G |
| | C303 | QCY31HK-471 | 470 pF | 50 V | Ceramic | G only |
| | C304 | QCY31HK-101 | 100 pF | 50 V | Ceramic | Except G |
| | C304 | QCY31HK-471 | 470 pF | 50 V | Ceramic | G only |
| | C305 | QCY31HK-182 | 1800 pF | 50 V | Ceramic | |
| | C306 | QCY31HK-182 | 1800 pF | 50 V | Ceramic | |
| | C307 | QCY31HK-682 | 6800 pF | 50 V | Ceramic | |
| | C308 | QCY31HK-682 | 6800 pF | 50 V | Ceramic | |
| | C309 | QCY31HK-101 | 100 pF | 50 V | Ceramic | |
| | C310 | QCY31HK-101 | 100 pF | 50 V | Ceramic | |
| | C311 | QETC1HM-475 | 4.7 μF | 50 V | Electro | |
| | C312 | QETC1HM-475 | 4.7 μF | 50 V | Electro | |

| ⚠ | Item No. | Part Number | Description | | | Areas |
|---|---|---|---|---|---|---|
| | C313 | QETC1AM-476 | 47 μF | 10 V | Electro | |
| | C314 | QETC1AM-476 | 47 μF | 10 V | Electro | |
| | R301 | QRD161J-222 | 2.2 kΩ | 1/6 W | Carbon | |
| | R302 | QRD161J-222 | 2.2 kΩ | 1/6 W | Carbon | |
| | R303 | QRD161J-473 | 47 kΩ | 1/6 W | Carbon | |
| | R304 | QRD161J-473 | 47 kΩ | 1/6 W | Carbon | |
| | R305 | QRD161J-751 | 750 Ω | 1/6 W | Carbon | |
| | R306 | QRD161J-751 | 750 Ω | 1/6 W | Carbon | |
| | R307 | QRD161J-393 | 39 kΩ | 1/6 W | Carbon | |
| | R308 | QRD161J-393 | 39 kΩ | 1/6 W | Carbon | |
| | R309 | QRD161J-474 | 470 kΩ | 1/6 W | Carbon | |
| | R310 | QRD161J-474 | 470 kΩ | 1/6 W | Carbon | |
| | R311 | QRD161J-104 | 100 kΩ | 1/6 W | Carbon | |
| | R312 | QRD161J-104 | 100 kΩ | 1/6 W | Carbon | |
| | P301 | EMV5101-008B | | | Plug Ass'y | |

**The Mark for Designated Areas**
G . . . . . West Germany

⚠ : Safety Parts

## Parts List of Amplifier P.C. Board Ass'y

### Transistors

| ⚠ | Item No. | Part Number | Description | | Areas |
|---|---|---|---|---|---|
| | | | | Maker | |
| | Q101 | 2SC1685(Q,R) | Silicon | Matsushita | |
| | Q102 | 2SC1685 (Q,R) | Silicon | Matsushita | |
| | Q103 | 2SC1685(Q,R) | Silicon | Matsushita | |
| | Q104 | 2SC1685(Q,R) | Silicon | Matsushita | |
| | Q105 | 2SD655(E,F) | Silicon | Hitachi | |
| | Q106 | 2SD655(E,F) | Silicon | Hitachi | |
| | Q107 | 2SC1685(Q,R) | Silicon | Matsushita | |
| | Q108 | 2SC1685(Q,R) | Silicon | Matsushita | |
| | Q109 | 2SA564A(Q,R) | Silicon | Matsushita | |
| | Q110 | 2SA564A(Q,R) | Silicon | Matsushita | |
| | Q111 | 2SA564A(Q,R) | Silicon | Matsushita | |
| | Q401 | 2SC2389(S,E) | Silicon | Rohm | |
| | Q801 | 2SD1265A(O,P) | Silicon | Matsushita | |
| | Q802 | 2SB941A(P,Q) | Silicon | Matsushita | |
| | Q901 | 2SC2389(S,E) | Silicon | Rohm | |
| | Q902 | 2SC2389(S,E) | Silicon | Rohm | |
| | Q903 | 2SC1685(Q,R) | Silicon | Matsushita | |
| | Q904 | 2SC1685(Q,R) | Silicon | Matsushita | |
| | Q905 | 2SA564A(Q,R) | Silicon | Matsushita | |
| | Q906 | 2SC1815(Y,GR) | Silicon | Toshiba | |

### ICs

| ⚠ | Item No. | Part Number | Description | Areas |
|---|---|---|---|---|
| | | | Maker | |
| | IC101 | M50761-304P | Ryoyo | |
| | IC102 | TC4052BP | Toshiba | |
| | IC201 | AN6887 | Matsushita | |
| | IC401 | M5218L-R | Ryoyo | |
| | IC701 | STK4171MK2 | Sanyo | |

### Diodes

| ⚠ | Item No. | Part Number | Description | | Areas |
|---|---|---|---|---|---|
| | | | | Maker | |
| | D101 | 1S2473 | Silicon | | |
| | D102 | 1S2473 | Silicon | | |
| | D103 | 1S2473 | Silicon | | |
| | D104 | 1S2473 | Silicon | | |
| | D105 | RD5.1EB2 | Zener | NEC | |
| | D106 | SLR-54VC50F165 | L.E.D. | Rohm | |
| | D107 | SLR-54DC50F165 | L.E.D. | Rohm | |
| | D108 | SLR-54DC50F165 | L.E.D. | Rohm | |
| | D109 | SLR-54DC50F165 | L.E.D. | Rohm | |
| | D110 | SLR-54DC50F165 | L.E.D. | Rohm | |
| | D111 | SLR-54VC50F165 | L.E.D. | Rohm | |
| | D112 | SLR-54VC50F165 | L.E.D. | Rohm | |
| | D113 | SLR-54VC50F165 | L.E.D. | Rohm | |
| | D114 | SLR-54VC50F165 | L.E.D. | Rohm | |
| | D115 | SLR-54VC50F165 | L.E.D. | Rohm | |
| | D116 | SLR-54VC50F165 | L.E.D. | Rohm | |
| | D117 | SLR-54VC50F165 | L.E.D. | Rohm | |
| ⚠ | D801 | S3V20F | Silicon | Shindengen | |
| ⚠ | D802 | S3V20F | Silicon | Shindengen | |
| ⚠ | D803 | S3V20F | Silicon | Shindengen | |
| ⚠ | D804 | S3V20F | Silicon | Shindengen | |
| | D805 | RD10EB3 | Zener | NEC | |
| | D806 | RD10EB3 | Zener | NEC | |
| | D807 | 1S2473 | Silicon | | |
| | D901 | 1S2473 | Silicon | | |
| | D902 | 1S2473 | Silicon | | |
| | D903 | 1S2473 | Silicon | | |

### Capacitors

| ⚠ | Item No. | Part Number | Description | | | Areas |
|---|---|---|---|---|---|---|
| | C101 | QCF31HP-103 | 0.01 μF | 50 V | Ceramic | |
| | C102 | QCF31HP-103 | 0.01 μF | 50 V | Ceramic | |
| | C103 | QET61EM-106 | 10 μF | 25 V | Electro | |
| | C104 | QET61CM-107 | 100 μF | 16 V | Electro | |
| | C105 | QCY31HK-151 | 150 pF | 50 V | Ceramic | |

### Capacitors

| ⚠ | Item No. | Part Number | Description | | | Areas |
|---|---|---|---|---|---|---|
| | C106 | QCY31HK-151 | 150 pF | 50 V | Ceramic | |
| | C107 | QCY31HK-221 | 220 pF | 50 V | Ceramic | |
| | C108 | QCF31HP-103 | 0.01 μF | 50 V | Ceramic | |
| | C111 | QET61CM-476 | 47 μF | 16 V | Electro | |
| | C112 | QET61CM-476 | 47 μF | 16 V | Electro | |
| | C113 | QET61EM-107 | 100 μF | 25 V | Electro | |
| | C114 | QET61EM-107 | 100 μF | 25 V | Electro | |
| | C115 | QETB1CM-477 | 470 μF | 16 V | Electro | |
| | C116 | QETC1EM-107 | 100 μF | 25 V | Electro | |
| | C201 | QETB1CM-477 | 470 μF | 16 V | Electro | |
| | C202 | QET61HM-475 | 4.7 μF | 50 V | Electro | |
| | C203 | QET61HM-475 | 4.7 μF | 50 V | Electro | |
| | C204 | QET61HM-475 | 4.7 μF | 50 V | Electro | |
| | C401 | QCY31HK-221 | 220 pF | 50 V | Ceramic | |
| | C402 | QET61EM-106 | 10 μF | 25 V | Electro | |
| | C403 | QCY31HK-101 | 100 pF | 50 V | Ceramic | |
| | C404 | QET61EM-106 | 10 μF | 25 V | Electro | |
| | C405 | QCS31HJ-100 | 10 pF | 50 V | Ceramic | |
| | C406 | QCS31HJ-100 | 10 pF | 50 V | Ceramic | |
| | C407 | QET61EM-106 | 10 μF | 25 V | Electro | |
| | C408 | QET61EM-106 | 10 μF | 25 V | Electro | |
| | C409 | QET61EM-106 | 10 μF | 25 V | Electro | |
| | C410 | QET61EM-106 | 10 μF | 25 V | Electro | |
| | C421 | QCY31HK-101 | 100 pF | 50 V | Ceramic | |
| | C422 | QCY31HK-101 | 100 pF | 50 V | Ceramic | |
| | C423 | QCF21HP-103 | 0.01 μF | 50 V | Ceramic | |
| | C424 | QCF21HP-103 | 0.01 μF | 50 V | Ceramic | |
| | C425 | QCF31HP-473 | 0.047 μF | 50 V | Ceramic | |
| | C501 | QCY21HK-101 | 100 pF | 50 V | Ceramic | F |
| | C502 | QCY21HK-101 | 100 pF | 50 V | Ceramic | F |
| | C503 | QCY21HK-101 | 100 pF | 50 V | Ceramic | F |
| | C504 | QCY21HK-101 | 100 pF | 50 V | Ceramic | F |
| | C505 | QCY21HK-101 | 100 pF | 50 V | Ceramic | F |
| | C506 | QCY21HK-101 | 100 pF | 50 V | Ceramic | F |
| | C601 | QFN31HK-153 | 0.015 μF | 50 V | Mylar | |
| | C602 | QFN31HK-153 | 0.015 μF | 50 V | Mylar | |
| | C603 | QFN31HK-823 | 0.082 μF | 50 V | Mylar | |
| | C604 | QFN31HK-823 | 0.082 μF | 50 V | Mylar | |
| | C605 | QCY31HK-332 | 3300 pF | 50 V | Ceramic | |
| | C606 | QCY31HK-332 | 3300 pF | 50 V | Ceramic | |
| | C607 | QFN31HK-183 | 0.018 μF | 50 V | Mylar | |
| | C608 | QFN31HK-183 | 0.018 μF | 50 V | Mylar | |
| | C609 | QCY31HK-331 | 330 pF | 50 V | Ceramic | |
| | C610 | QCY31HK-331 | 330 pF | 50 V | Ceramic | |
| | C611 | QCY31HK-122 | 1200 pF | 50 V | Ceramic | |
| | C612 | QCY31HK-122 | 1200 pF | 50 V | Ceramic | |
| | C701 | QET61HM-105 | 1 μF | 50 V | Electro | |
| | C702 | QET61HM-105 | 1 μF | 50 V | Electro | |
| | C703 | QCY31HK-121 | 120 pF | 50 V | Ceramic | |
| | C704 | QCY31HK-121 | 120 pF | 50 V | Ceramic | |
| | C705 | QCY31HK-101 | 100 pF | 50 V | Ceramic | |
| | C706 | QCY31HK-101 | 100 pF | 50 V | Ceramic | |
| | C707 | QCS31HJ-120 | 12 pF | 50 V | Ceramic | |
| | C708 | QCS31HJ-120 | 12 pF | 50 V | Ceramic | |
| | C709 | QET61AM-476 | 47 μF | 10 V | Electro | |
| | C710 | QET61AM-476 | 47 μF | 10 V | Electro | |
| | C711 | QET61HM-226 | 22 μF | 50 V | Electro | |
| | C712 | QET61HM-226 | 22 μF | 50 V | Electro | |
| | C713 | QET61HM-475 | 4.7 μF | 50 V | Electro | |
| | C714 | QET61HM-475 | 4.7 μF | 50 V | Electro | |
| | C715 | QEH51HM-107 | 100 μF | 50 V | Electro | |
| | C716 | QET61HM-106 | 10 μF | 50 V | Electro | |
| | C717 | QCF31HP473 | 0.047 μF | 50 V | Ceramic | |
| | C718 | QCF31HP-473 | 0.047 μF | 50 V | Ceramic | |
| | C719 | QCF31HP-473 | 0.047 μF | 50 V | Ceramic | |
| | C720 | QCF31HP-473 | 0.047 μF | 50 V | Ceramic | |
| | C801 | QEZ0061-478 | 4700 μF | | Electro | |
| | C802 | QEZ0061-478 | 4700 μF | | Electro | |
| | C803 | QET61CM-226 | 22 μF | 16 V | Electro | |

⚠ : Safety Parts

### Capacitors

| ⚠ | Item No. | Part Number | Description | | | Areas |
|---|---|---|---|---|---|---|
| | C804 | QET61CM-226 | 22 μF | 16 V | Electro | |
| | C805 | QCE22HP-103A | 0.01 μF | 500 V | Ceramic | B |
| | C805 | QCE22HP-103A | 0.01 μF | 500 V | Ceramic | C |
| | C805 | QCE22HP-103A | 0.01 μF | 500 V | Ceramic | F |
| | C806 | QCE22HP-103A | 0.01 μF | 500 V | Ceramic | B |
| | C806 | QCE22HP-103A | 0.01 μF | 500 V | Ceramic | C |
| | C806 | QCE22HP-103A | 0.01 μF | 500 V | | F |
| | C807 | QET61HM-225 | 2.2 μF | 50 V | Electro | |
| | C901 | QET61AM-476 | 47 μF | 10 V | Electro | |
| | C902 | QCF31HP-103 | 0.01 μF | 50 V | Ceramic | |

### Resistors

| ⚠ | Item No. | Part Number | Description | | | Areas |
|---|---|---|---|---|---|---|
| | R101 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R102 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R103 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R104 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R105 | QRD141J-101S | 100 Ω | 1/4 W | Carbon | |
| | R106 | QRD141J-101S | 100 Ω | 1/4 W | Carbon | |
| | R107 | QRD141J-473S | 47 kΩ | 1/4 W | Carbon | |
| | R108 | QRD141J-473S | 47 kΩ | 1/4 W | Carbon | |
| | R109 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R110 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R111 | QRD141J-222S | 2.2 kΩ | 1/4 W | Carbon | |
| | R113 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R114 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R115 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R116 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R117 | QRD141J-473S | 47 kΩ | 1/4 W | Carbon | |
| | R119 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R120 | QRD141J-473S | 47 kΩ | 1/4 W | Carbon | |
| | R123 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R124 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R125 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R126 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R127 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R128 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R129 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R130 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R131 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R132 | QRD141J-101S | 100 Ω | 1/4 W | Carbon | |
| | R133 | QRD141J-473S | 47 kΩ | 1/4 W | Carbon | |
| | R134 | QRD141J-473S | 47 kΩ | 1/4 W | Carbon | |
| | R135 | QRD141J-681S | 680 Ω | 1/4 W | Carbon | |
| | R136 | QRD141J-331S | 330 Ω | 1/4 W | Carbon | |
| | R137 | QRD141J-331S | 330 Ω | 1/4 W | Carbon | |
| | R138 | QRD141J-331S | 330 Ω | 1/4 W | Carbon | |
| | R139 | QRD141J-331S | 330 Ω | 1/4 W | Carbon | |
| | R140 | QRD141J-331S | 330 Ω | 1/4 W | Carbon | |
| | R151 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R152 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R153 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R154 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R155 | QRD141J-100S | 10 Ω | 1/4 W | Carbon | |
| | R156 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R158 | QRD141J-332S | 3.3 kΩ | 1/4 W | Carbon | |
| | R159 | QRD141J-105S | 1 MΩ | 1/4 W | Carbon | |
| | R160 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R161 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R162 | QRD141J-102S | 1 kΩ | 1/4 W | Carbon | |
| | R163 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| ⚠ | R164 | QRG022J-151AM | 150 Ω | 2 W | O.M. Film | |
| | R165 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R166 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R167 | QRD141J-221S | 220 Ω | 1/4 W | Carbon | |
| | R168 | QRD141J-221S | 220 Ω | 1/4 W | Carbon | |
| ⚠ | R169 | QRD145J-101S | 100 Ω | 1/4 W | Carbon | |
| ⚠ | R170 | QRD145J-101S | 100 Ω | 1/4 W | Carbon | |

### Resistors

| ⚠ | Item No. | Part Number | Description | | | Areas |
|---|---|---|---|---|---|---|
| | R171 | QRD141J-471S | 470 Ω | 1/4 W | Carbon | |
| | R172 | QRD141J-471S | 470 Ω | 1/4 W | Carbon | |
| | R201 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R202 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R203 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R204 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R205 | QRD141J-562S | 5.6 kΩ | 1/4 W | Carbon | |
| | R206 | QRD141J-563S | 56 kΩ | 1/4 W | Carbon | |
| | R207 | QRD141J-563S | 56 kΩ | 1/4 W | Carbon | |
| | R208 | QRD141J-562S | 5.6 kΩ | 1/4 W | Carbon | |
| | R209 | QRD141J-680S | 68 Ω | 1/4 W | Carbon | |
| | R401 | QVZ5205-004 | 10 kΩ | | Variable | |
| | R402 | QRD141J-102S | 1 kΩ | 1/4 W | Carbon | |
| | R403 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R404 | QRD141J-105S | 1 MΩ | 1/4 W | Carbon | |
| | R405 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R406 | QRD141J-222S | 2.2 kΩ | 1/4 W | Carbon | |
| | R407 | QRD141J-222S | 2.2 kΩ | 1/4 W | Carbon | |
| | R408 | QRD141J-222S | 2.2 kΩ | 1/4 W | Carbon | |
| | R409 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R410 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R411 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R412 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R413 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R414 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R415 | QRD141J-221S | 220 Ω | 1/4 W | Carbon | |
| | R417 | QRD141J-823S | 82 kΩ | 1/4 W | Carbon | |
| | R418 | QRD141J-823S | 82 kΩ | 1/4 W | Carbon | |
| | R419 | QRD141J-472S | 4.7 kΩ | 1/4 W | Carbon | |
| | R420 | QRD141J-472S | 4.7 kΩ | 1/4 W | Carbon | |
| ⚠ | R501 | QRG012J-331A | 330 Ω | 1 W | O.M. Film | |
| ⚠ | R502 | QRG012J-331A | 330 Ω | 1 W | O.M. Film | |
| | R509 | QRD141J-333S | 33 kΩ | 1/4 W | Carbon | |
| | R510 | QRD141J-333S | 33 kΩ | 1/4 W | Carbon | |
| | R511 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R512 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R513 | QRD141J-123S | 12 kΩ | 1/4 W | Carbon | |
| | R514 | QRD141J-123S | 12 kΩ | 1/4 W | Carbon | |
| | R601 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R602 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| | R603 | QRD141J-332S | 3.3 kΩ | 1/4 W | Carbon | |
| | R604 | QRD141J-332S | 3.3 kΩ | 1/4 W | Carbon | |
| | R605 | QRD141J-472S | 4.7 kΩ | 1/4 W | Carbon | |
| | R606 | QRD141J-472S | 4.7 kΩ | 1/4 W | Carbon | |
| | R607 | QRD141J-821S | 820 Ω | 1/4 W | Carbon | |
| | R608 | QRD141J-821S | 820 Ω | 1/4 W | Carbon | |
| | R609 | QVZ5206-003 | 100 kΩ | | Variable | |
| | R610 | QVZ5206-003 | 100 kΩ | | Variable | |
| | R611 | QVZ5205-001 | 250 kΩ | | Variable | |
| | R612 | QVTB04D-EF5B | 250 kΩ | | Variable | |
| | R613 | QRD148J-473S | 47 kΩ | 1/4 W | Carbon | |
| | R614 | QRD148J-473S | 47 kΩ | 1/4 W | Carbon | |
| | R701 | QRD141J-102S | 1 kΩ | 1/4 W | Carbon | |
| | R702 | QRD141J-102S | 1 kΩ | 1/4 W | Carbon | |
| | R703 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R704 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R705 | QRD141J-751S | 750 Ω | 1/4 W | Carbon | |
| | R706 | QRD141J-751S | 750 Ω | 1/4 W | Carbon | |
| | R707 | QRD141J-823S | 82 kΩ | 1/4 W | Carbon | |
| | R708 | QRD141J-823S | 82 kΩ | 1/4 W | Carbon | |
| | R709 | QRD141J-153S | 15 kΩ | 1/4 W | Carbon | |
| | R710 | QRD141J-153S | 15 kΩ | 1/4 W | Carbon | |
| | R711 | QRD141J-392S | 3.9 kΩ | 1/4 W | Carbon | |
| | R712 | QRD141J-392S | 3.9 kΩ | 1/4 W | Carbon | |
| | R715 | QRD141J-272S | 2.7 kΩ | 1/4 W | Carbon | |
| | R716 | QRD141J-272S | 2.7 kΩ | 1/4 W | Carbon | |
| ⚠ | R717 | QRX012J-R22A | 0.22 Ω | 1 W | O.M. Film | |
| ⚠ | R718 | QRX012J-R22A | 0.22 Ω | 1 W | O.M. Film | |
| ⚠ | R719 | QRD145J-101S | 100 Ω | 1/4 W | UNF. Carbon | |
| ⚠ | R720 | QRD145J-100S | 10 Ω | 1/4 W | UNF. Carbon | |

⚠ : Safety Parts

Resistors

| ⚠ | Item No. | Part Number | Description | | | Areas |
|---|---|---|---|---|---|---|
| ⚠ | R721 | QRD145J-100 | 10 Ω | 1/4 W | UNF Carbon | |
| ⚠ | R722 | QRD145J-100 | 10 Ω | 1/4 W | UNF Carbon | |
| ⚠ | R723 | QRD145J-4R7S | 4.7 Ω | 1/4 W | UNF Carbon | B |
| ⚠ | R723 | QRZ0061-4R7 | 4.7 Ω | 1/4 W | Fusible | C |
| ⚠ | R723 | QRZ0061-4R7 | 4.7 Ω | 1/4 W | Fusible | F |
| ⚠ | R729 | QRD145J-272S | 2.7 kΩ | 1/4 W | UNF Carbon | |
| | R730 | QRD141J-102S | 1 kΩ | 1/4 W | Carbon | |
| | R803 | QRD141J-682S | 6.8 kΩ | 1/4 W | Carbon | |
| | R804 | QRD141J-682S | 6.8 kΩ | 1/4 W | Carbon | |
| | R805 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R806 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R807 | QRD141J-223S | 22 kΩ | 1/4 W | Carbon | |
| ⚠ | R817 | QRD125J-470 | 47 Ω | 1/2 W | UNF Carbon | |
| ⚠ | R818 | QRD145J-102S | 1 kΩ | 1/4 W | UNF Carbon | |
| | R901 | QRD141J-332S | 3.3 kΩ | 1/4 W | Carbon | |
| | R902 | QRD141J-332S | 3.3 kΩ | 1/4 W | Carbon | |
| | R903 | QRD141J-392S | 3.9 kΩ | 1/4 W | Carbon | |
| | R904 | QRD141J-392S | 3.9 kΩ | 1/4 W | Carbon | |
| | R905 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R906 | QRD141J-104S | 100 kΩ | 1/4 W | Carbon | |
| | R907 | QRD141J-683S | 68 kΩ | 1/4 W | Carbon | |
| | R908 | QRD141J-334S | 330 kΩ | 1/4 W | Carbon | |
| ⚠ | R909 | QRD145J-221S | 220 Ω | 1/4 W | UNF Carbon | B |
| | R909 | QRD141J-221S | 220 Ω | 1/4 W | Carbon | C |
| | R909 | QRD141J-221S | 220 Ω | 1/4 W | Carbon | F |
| ⚠ | R910 | QRG022J-681A | 680 Ω | 2 W | O.M.Film | |

Resistors

| ⚠ | Item No. | Part Number | Description | | | Areas |
|---|---|---|---|---|---|---|
| | R911 | QRD141J-103S | 10 kΩ | 1/4 W | Carbon | |
| | R913 | QRD141J-562S | 5.6 kΩ | 1/4 W | Carbon | |
| | R914 | QRD141J-562S | 5.6 kΩ | 1/4 W | Carbon | |

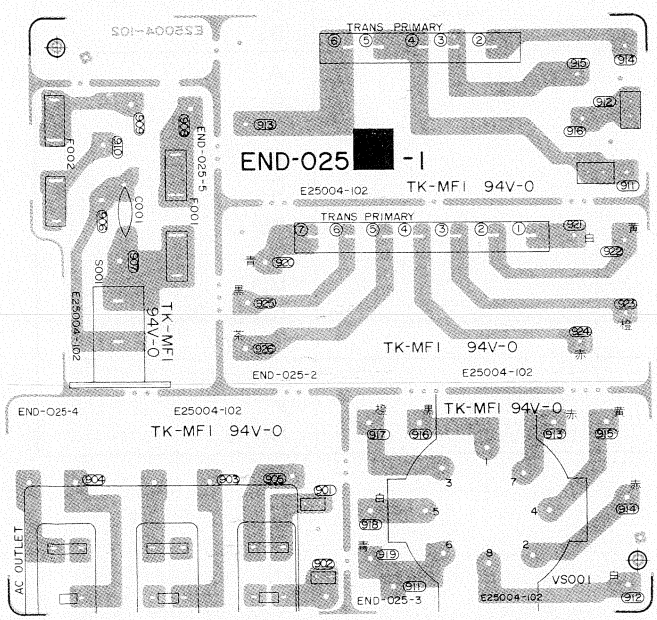
Others

| ⚠ | Item No. | Part Number | Description | Areas |
|---|---|---|---|---|
| | | A41096 | Tab | |
| | | E11054-202 | Circuit Board | B |
| | | E11054-202 | Circuit Board | C |
| | | E11054-202 | Circuit Board | F |
| | | SBSB3008Z | Tapping Screw | |
| | H101 | E70945-H40B | Heat Sink | |
| | J101 | QMS2501-105 | Mini Jack | |
| | J102 | QMS2501-105 | Mini Jack | |
| | J103 | QMS3501-018 | Jack Ass'y | |
| | J501 | EMN00TV-201A | 2P Pin Jack | |
| | J502 | EMN00TV-602A | Pin Jack Ass'y | |
| | J602 | E04365-003 | 3P Socket | |
| | J701 | EMB90YV-401A | Speaker Terminal | |
| | J801 | QMS6312-020 | Headphone Jack | |
| | S101 | ESP0001-007 | Push Switch | |
| | S102 | ESP0001-007 | Push Switch | |
| | S103 | ESP0001-007 | Push Switch | |
| | S104 | ESP0001-007 | Push Switch | |
| | CF101 | ECX0000-400KS | C. Resonator | |
| | J104 | E04365-008 | 8P Connector | |
| | J401 | QMS6313-019 | MIC. Jack | |
| | J402 | E04365-005 | F.W. Socket | |
| | J503 | EMN00TV-602A | Pin Jack Ass'y | |
| | J601 | E04365-005 | F. W. Socket | |
| | RY701 | ESK5D24-216 | Relay | |
| | S501 | QST2101-E06 | Push Switch | |

⚠ : Safety Parts

## 2-(2) END-025□ Power Block, etc P.C. Board Ass'y

| P.C. Board Ass'y | Designated Areas |
|---|---|
| END-025 [H] | U.S.A. |
| END-025 [I] | U.S. Military Market & Other Countries |
| END-025 [J] | Europe & West Germany |
| END-025 [KBS] | U.K. |
| END-025 [L] | Australia |
| END-025 [M] | Canada |



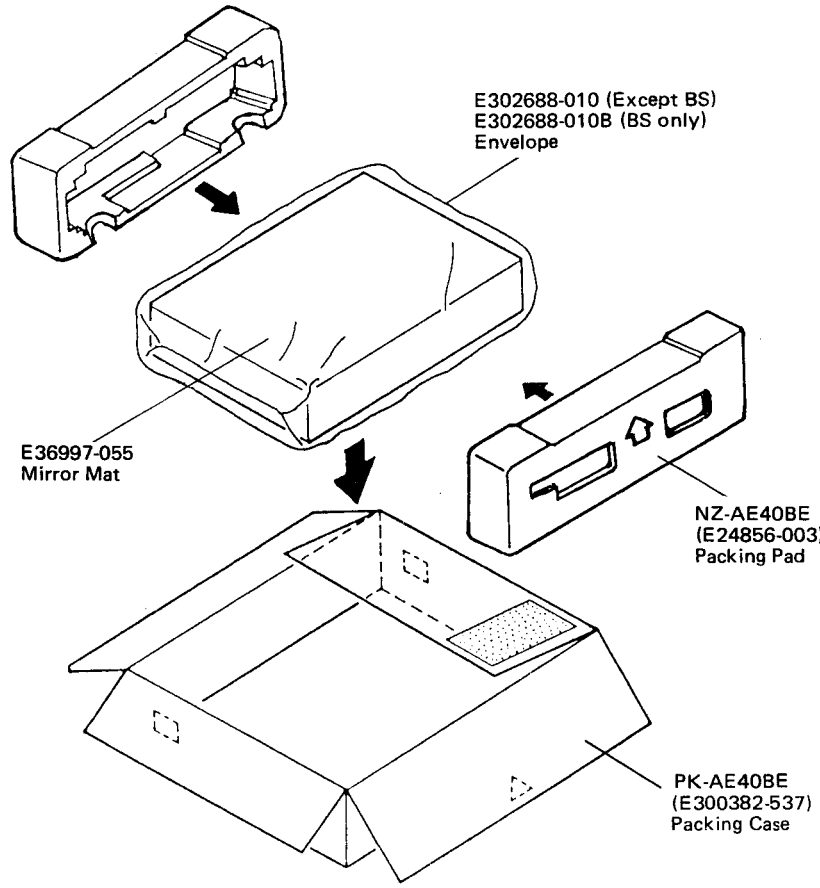

| ⚠ | Item No. | Part Number | Description | Areas |
|---|---|---|---|---|
| | | E25004-102 | Circuit Board | H |
| | | E25004-102 | Circuit Board | I |
| | | E25004-102 | Circuit Board | J |
| | | E25004-102 | Circuit Board | L |
| | | E25004-102 | Circuit Board | M |
| | | E25004-102BS | Circuit Board | KBS |
| ⚠ | S001 | QSP1106-004 | Power Switch | H |
| ⚠ | S001 | QSP1106-004 | Power Switch | I |
| ⚠ | S001 | QSP1106-004 | Power Switch | J |
| ⚠ | S001 | QSP1106-004 | Power Switch | L |
| ⚠ | S001 | QSP1106-004 | Power Switch | M |
| ⚠ | S001 | QSP1106-004BS | Power Switch | KBS |
| ⚠ | C001 | QCZ9019-472 | Ceramic Capacitor | H |
| ⚠ | C001 | QCZ9019-472 | Ceramic Capacitor | I |
| ⚠ | C001 | QCZ9019-472 | Ceramic Capacitor | J |
| ⚠ | C001 | QCZ9019-472 | Ceramic Capacitor | L |
| ⚠ | C001 | QCZ9019-472 | Ceramic Capacitor | M |
| ⚠ | C001 | QCZ9019-472BS | Ceramic Capacitor | KBS |
| | | EMG7331-001 | Fuse Clip | |
| ⚠ | | QMC0637-004 | AC Outlet | H |
| ⚠ | | QMC0637-004 | AC Outlet | I |
| ⚠ | | QMC0638-001 | AC Outlet | M |
| | | E65508-002 | Tab | |
| ⚠ | | QSR0085-007 | Voltage Selector | I |

⚠ : Safety Parts

# 3. Packing Materials and Part Numbers

**The Marks for Designated Areas**

J . . . . . U.S.A.
C . . . . . Canada
E . . . . . Europe
A . . . . . Australia
G . . . . . West Germany
BS . . . . . U.K.
P, PG . . . . . U.S. Military Market
U . . . . . Other Countries

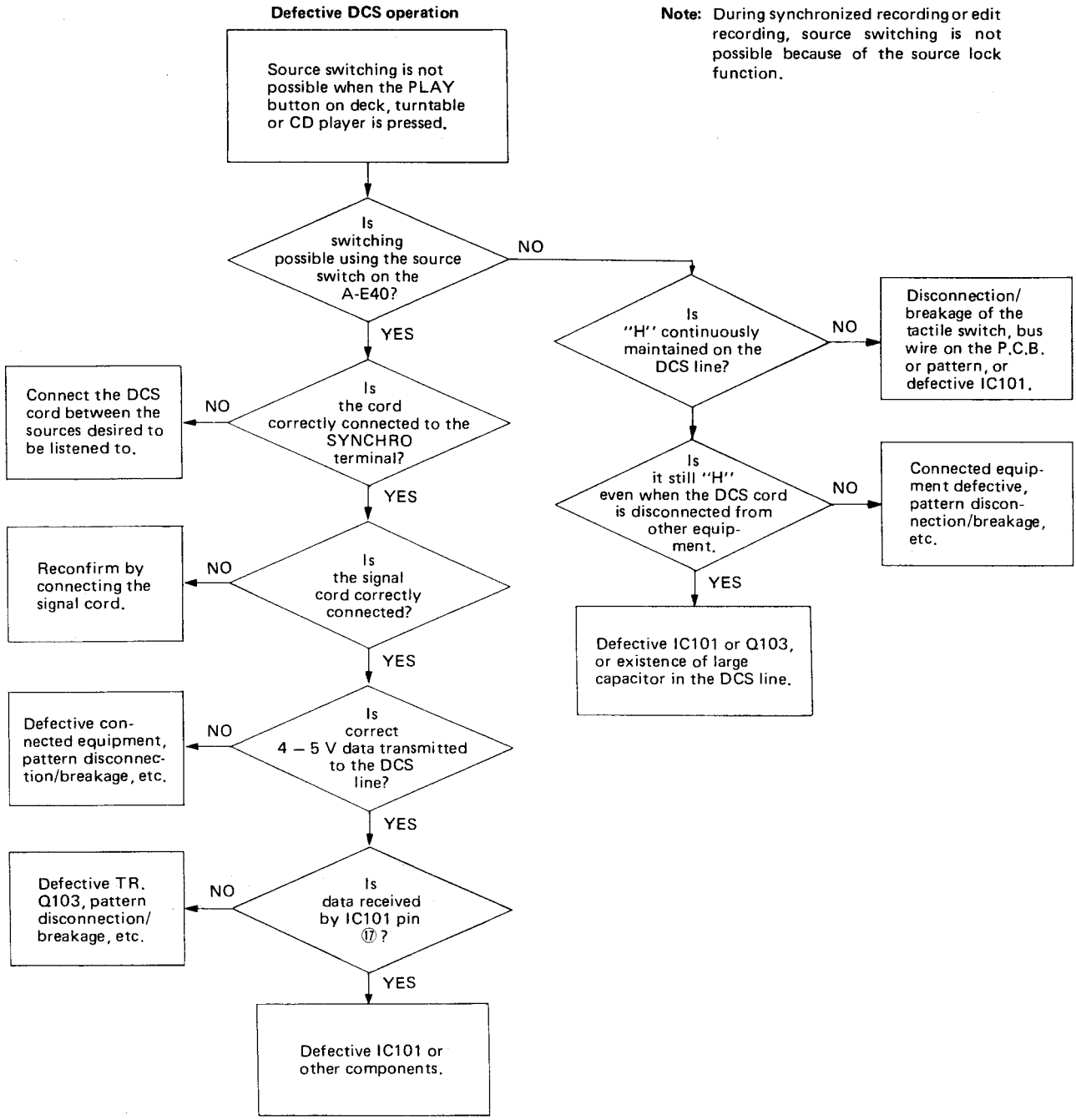



# 4. Accessories List

| ⚠ | Part Number | Part Name | Description | Areas |
|---|---|---|---|---|
| | E30580-1239A | Instruction Book | | Except BS |
| | E30580-1239ABS | Instruction Book | | BS only |
| | BT20048B | Warranty Card | | J, P, PG |
| | BT20025H | Warranty Card | | C |
| | BT20060 | Warranty Card | | BS |
| | BT20029C | Warranty Card | | A |
| | BT20064 | Warranty Card | | G |
| | BT20046B | Service Information Card | | J |
| | BT20044D | Safety Instruction Sheet | | J, P, PG |
| | BT20071A | Service Center List | | C |
| | BT20066 | EEC Agency | | BS, G |
| | BT20054-006A | FTZ Information | | G |
| ⚠ | E04056 | Siemens Plug | | U, G |
| | E300196-033 | Envelope | | Except BS |
| | E300196-033B | Envelope | | BS only |
| | E6581-4 | Envelope | | U, P, PG |
| | E35497-017 | Caution Sheet | 110 V | P |
| | E35497-019 | Caution Sheet | 220 V | U, PG |

⚠ : Safety Parts

## 5-(4) Troubleshooting


Defective DCS operation
Source switching is not possible when the PLAY button on deck, turntable or CD player is pressed.
Is switching possible using the source switch on the A-E40?
NO
YES
Is "H" continuously maintained on the DCS line?
NO
Disconnection/ breakage of the tactile switch, bus wire on the P.C.B. or pattern, or defective IC101.
Is the cord correctly connected to the SYNCHRO terminal?
NO
Connect the DCS cord between the sources desired to be listened to.
YES
Is it still "H" even when the DCS cord is disconnected from other equipment.
NO
Connected equipment defective, pattern disconnection/breakage, etc.
YES
Defective IC101 or Q103, or existence of large capacitor in the DCS line.
Is the signal cord correctly connected?
NO
Reconfirm by connecting the signal cord.
YES
Is correct 4 – 5 V data transmitted to the DCS line?
NO
Defective connected equipment, pattern disconnection/breakage, etc.
YES
Is data received by IC101 pin ⑰?
NO
Defective TR. Q103, pattern disconnection/ breakage, etc.
YES
Defective IC101 or other components.

**Note:** During synchronized recording or edit recording, source switching is not possible because of the source lock function.

When DCS is defective as shown in the above example, check if signals are output on the DCS data line.

**(Simplified check method)**

Apply probes of the tester (for voltage measurement) between the SYNCHRO terminal and the ground, and press the button of the equipment to be checked then check if the tester needle moves with a momentary shaking motion.